



SEQUENCE LISTING

<110> Gish, Kurt
Mack, David

<120> Novel Methods of Diagnosing Breast Cancer, Compositions, and Methods of Screening for Breast Cancer Modulators

<130> A-69028/DJB/JJD

<140> US 09/747,371

<141> 2000-12-21

<150> PCT/ US/00/06952

<151> 2000-03-15

<160> 4

<170> PatentIn version 3.0

<210> 1

<211> 3737

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

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gcc tgg gcg gtg ctg ctg ctg ctg ctg ctg ccg cca ctg ctg ctg 161
Ala Trp Ala Val Leu Leu Leu Leu Leu Leu Pro Pro Leu Leu Leu
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Leu Ala Gly Ala Val Pro Pro Gly Arg Gly Arg Ala Ala Gly Pro Gln
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Glu Asp Val Asp Glu Cys Ala Gln Gly Leu Asp Asp Cys His Ala Asp
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Ala Leu Cys Gln Asn Thr Pro Thr Ser Tyr Lys Cys Ser Cys Lys Pro
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Gly Tyr Gln Gly Glu Gly Arg Gln Cys Glu Asp Ile Asp Glu Cys Gly
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Tyr	Gly	Phe	Thr	His	Cys	Gly	Asp	Thr	Asn	Glu	Cys	Ser	Ile	Asn	Asn		
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Gln	Cys	His	Pro	Gly	Tyr	Lys	Leu	His	Trp	Asn	Lys	Lys	Asp	Cys	Val		
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Glu	Val	Lys	Gly	Leu	Leu	Pro	Thr	Ser	Val	Ser	Pro	Arg	Val	Ser	Leu		
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Thr	Phe	Lys	Leu	Asn	Glu	Gly	Lys	Cys	Ser	Leu	Lys	Asn	Ala	Glu	Leu		
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gcc	atc	cgc	acg	ctc	aga	aag	gcc	gtc	cac	agg	gag	cag	ttt	cac	ctc	1889	
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Pro Pro Gly Arg Gly Arg Ala Ala Gly Pro Gln Glu Asp Val Asp Glu
 35 40 45

Cys Ala Gln Gly Leu Asp Asp Cys His Ala Asp Ala Leu Cys Gln Asn
 50 55 60

Thr Pro Thr Ser Tyr Lys Cys Ser Cys Lys Pro Gly Tyr Gln Gly Glu
 65 70 75 80

Gly Arg Gln Cys Glu Asp Ile Asp Glu Cys Gly Asn Glu Leu Asn Gly
 85 90 95

Gly Cys Val His Asp Cys Leu Asn Ile Pro Gly Asn Tyr Arg Cys Thr
 100 105 110

Cys Phe Asp Gly Phe Met Leu Ala His Asp Gly His Asn Cys Leu Asp
 115 120 125

Val Asp Glu Cys Leu Glu Asn Asn Gly Gly Cys Gln His Thr Cys Val
 130 135 140

Asn Val Met Gly Ser Tyr Glu Cys Cys Cys Lys Glu Gly Phe Phe Leu
 145 150 155 160

Ser Asp Asn Gln His Thr Cys Ile His Arg Ser Glu Glu Gly Leu Ser
 165 170 175

Cys Met Asn Lys Asp His Gly Cys Ser His Ile Cys Lys Glu Ala Pro
 180 185 190

Arg Gly Ser Val Ala Cys Glu Cys Arg Pro Gly Phe Glu Leu Ala Lys
 195 200 205

Asn Gln Arg Asp Cys Ile Leu Thr Cys Asn His Gly Asn Gly Gly Cys
210 215 220

Gln His Ser Cys Asp Asp Thr Ala Asp Gly Pro Glu Cys Ser Cys His
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Pro Gln Tyr Lys Met His Thr Asp Gly Arg Ser Cys Leu Glu Arg Glu
245 250 255

Asp Thr Val Leu Glu Val Thr Glu Ser Asn Thr Thr Ser Val Val Asp
260 265 270

Gly Asp Lys Arg Val Lys Arg Arg Leu Leu Met Glu Thr Cys Ala Val
275 280 285

Asn Asn Gly Gly Cys Asp Arg Thr Cys Lys Asp Thr Ser Thr Gly Val
290 295 300

His Cys Ser Cys Pro Val Gly Phe Thr Leu Gln Leu Asp Gly Lys Thr
305 310 315 320

Cys Lys Asp Ile Asp Glu Cys Gln Thr Arg Asn Gly Gly Cys Asp His
325 330 335

Phe Cys Lys Asn Ile Val Gly Ser Phe Asp Cys Gly Cys Lys Lys Gly
340 345 350

Phe Lys Leu Leu Thr Asp Glu Lys Ser Cys Gln Asp Val Asp Glu Cys
355 360 365

Ser Leu Asp Arg Thr Cys Asp His Ser Cys Ile Asn His Pro Gly Thr
370 375 380

Phe Ala Cys Ala Cys Asn Arg Gly Tyr Thr Leu Tyr Gly Phe Thr His
385 390 395 400

Cys Gly Asp Thr Asn Glu Cys Ser Ile Asn Asn Gly Gly Cys Gln Gln
405 410 415

Val Cys Val Asn Thr Val Gly Ser Tyr Glu Cys Gln Cys His Pro Gly
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Tyr Lys Leu His Trp Asn Lys Lys Asp Cys Val Glu Val Lys Gly Leu
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Leu Pro Thr Ser Val Ser Pro Arg Val Ser Leu His Cys Gly Lys Ser

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Ser Ser Asp Val Thr Thr Ile Arg Thr Ser Val Thr Phe Lys Leu Asn				
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Glu Gly Lys Cys Ser Leu Lys Asn Ala Glu Leu Phe Pro Glu Gly Leu				
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Arg Pro Ala Leu Pro Glu Lys His Ser Ser Val Lys Glu Ser Phe Arg				
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Tyr Val Asn Leu Thr Cys Ser Ser Gly Lys Gln Val Pro Gly Ala Pro				
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Ile Val Lys Arg Thr Glu Lys Arg Leu Arg Lys Ala Ile Arg Thr Leu				
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Arg Lys Ala Val His Arg Glu Gln Phe His Leu Gln Leu Ser Gly Met				
	595		600	605
Asn Leu Asp Val Ala Lys Lys Pro Pro Arg Thr Ser Glu Arg Gln Ala				
	610		615	620
Glu Ser Cys Gly Val Gly Gln Gly His Ala Glu Asn Gln Cys Val Ser				
625		630		635 640
Cys Arg Ala Gly Thr Tyr Tyr Asp Gly Ala Arg Glu Arg Cys Ile Leu				
	645		650	655
Cys Pro Asn Gly Thr Phe Gln Asn Glu Glu Gly Gln Met Thr Cys Glu				
	660		665	670
Pro Cys Pro Arg Pro Gly Asn Ser Gly Ala Leu Lys Thr Pro Glu Ala				
	675		680	685
Trp Asn Met Ser Glu Cys Gly Gly Leu Cys Gln Pro Gly Glu Tyr Ser				
	690		695	700

Ala Asp Gly Phe Ala Pro Cys Gln Leu Cys Ala Leu Gly Thr Phe Gln
705 710 715 720

Pro Glu Ala Gly Arg Thr Ser Cys Phe Pro Cys Gly Gly Gly Leu Ala
725 730 735

Thr Lys His Gln Gly Ala Thr Ser Phe Gln Asp Cys Glu Thr Arg Val
740 745 750

Gln Cys Ser Pro Gly His Phe Tyr Asn Thr Thr Thr His Arg Cys Ile
755 760 765

Arg Cys Pro Val Gly Thr Tyr Gln Pro Glu Phe Gly Lys Asn Asn Cys
770 775 780

Val Ser Cys Pro Gly Asn Thr Thr Thr Asp Phe Asp Gly Ser Thr Asn
785 790 795 800

Ile Thr Gln Cys Lys Asn Arg Arg Cys Gly Gly Glu Leu Gly Asp Phe
805 810 815

Thr Gly Tyr Ile Glu Ser Pro Asn Tyr Pro Gly Asn Tyr Pro Ala Asn
820 825 830

Thr Glu Cys Thr Trp Thr Ile Asn Pro Pro Pro Lys Arg Arg Ile Leu
835 840 845

Ile Val Val Pro Glu Ile Phe Leu Pro Ile Glu Asp Asp Cys Gly Asp
850 855 860

Tyr Leu Val Met Arg Lys Thr Ser Ser Ser Asn Ser Val Thr Thr Tyr
865 870 875 880

Glu Thr Cys Gln Thr Tyr Glu Arg Pro Ile Ala Phe Thr Ser Arg Ser
885 890 895

Lys Lys Leu Trp Ile Gln Phe Lys Ser Asn Glu Gly Asn Ser Ala Arg
900 905 910

Gly Phe Gln Val Pro Tyr Val Thr Tyr Asp Glu Asp Tyr Gln Glu Leu
915 920 925

Ile Glu Asp Ile Val Arg Asp Gly Arg Leu Tyr Ala Ser Glu Asn His
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Thr	Tyr	Glu	Lys	Glu	Val	Thr	Ala	Ser	Cys	Asn	Leu	Ser	Cys	Val	Val	565	570	575
Lys	Arg	Thr	Glu	Lys	Arg	Leu	Arg	Lys	Ala	Leu	Arg	Thr	Leu	Lys	Arg	580	585	590
Ala	Ala	His	Arg	Glu	Gln	Phe	His	Leu	Gln	Leu	Ser	Gly	Met	Asp	Leu	595	600	605
Asp	Met	Ala	Lys	Thr	Pro	Ser	Arg	Val	Ser	Gly	Gln	His	Glu	Glu	Thr	610	615	620
Cys	Gly	Val	Gly	Gln	Gly	His	Glu	Glu	Ser	Gln	Cys	Val	Ser	Cys	Arg	625	630	635
Ala	Gly	Thr	Tyr	Tyr	Asp	Gly	Ser	Gln	Glu	Arg	Cys	Ile	Leu	Cys	Pro	645	650	655
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Pro	Arg	Pro	Glu	Asn	Leu	Gly	Ser	Leu	Lys	Ile	Ser	Glu	Ala	Trp	Asn	675	680	685
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Gln	Cys	Lys	Asn	Arg	Lys	Cys	Gly	Gly	Glu	Leu	Gly	Asp	Phe	Thr	Gly	805	810	815
Tyr	Ile	Glu	Ser	Pro	Asn	Tyr	Pro	Gly	Asn	Tyr	Pro	Ala	Asn	Ser	Glu	820	825	830
Cys	Thr	Trp	Thr	Ile	Asn	Pro	Pro	Pro	Lys	Arg	Arg	Ile	Leu	Ile	Val	835	840	845

